

Patent claims

1. Creamy, milk-free o/w emulsion, comprising
 - a) an aqueous phase which contains water, water-soluble carbohydrate, hydrocolloid and optionally further hydrophilic constituents, and
 - b) an oil phase which contains edible oil and/or edible fat, emulsifier and optionally further lipophilic constituents,the weight ratio of the aqueous phase to the oil phase (a : b) being in the range of 9 : 1 to 6 : 4.
2. O/w emulsion according to claim 1, wherein the proportion of water-soluble carbohydrate is 10 to 50 wt.-% (relative to the whole emulsion).
3. O/w emulsion according to one of claims 1 and 2, wherein the water-soluble carbohydrate is selected from glucose, fructose, saccharose, glucose syrup, dried glucose syrup, fructose syrup, maltodextrins and/or oligofructoses.
4. O/w emulsion according to one of the previous claims, wherein the proportion of hydrocolloid is 0.1 to 3 wt.-% (relative to the whole emulsion).
5. O/w emulsion according to one of the previous claims, wherein the hydrocolloid is selected from guar, locust bean gum, xanthane, pectin, carrageenan, alginates, carboxymethylcellulose, hydroxypropylmethylcellulose, microcrystalline cellulose and/or inulin.

6. O/w emulsion according to one of the previous claims, containing a hydrocolloid-stabilizing system comprising hydroxypropylmethylcellulose, microcrystalline cellulose and guar in a weight ratio of 1 : 0.5 to 0.75 : 0.1 to 0.3.
7. O/w emulsion according to one of the previous claims, optionally containing acidulant as further hydrophilic constituent.
8. O/w emulsion according to one of the previous claims, wherein the acidulant is selected from lactic acid, citric acid, tartaric acid and/or malic acid and the proportion of acidulant is 0.001 to 0.1 wt.-% (relative to the whole emulsion).
9. O/w emulsion according to one of the previous claims, wherein the proportion of edible oil and/or edible fat is 10 to 40 wt.-% (relative to the whole emulsion).
10. O/w emulsion according to one of the previous claims, wherein the edible oil and/or edible fat is selected from palm oil, palm-kernel oil, sunflower oil, soya oil, rape-seed oil, coconut oil and/or technologically modified derivatives of the same.
11. O/w emulsion according to one of the previous claims, wherein the proportion of emulsifier is 0.1 to 5 wt.-% (relative to the whole emulsion).
12. O/w emulsion according to one of the previous claims, wherein the emulsifier is selected from mono- and diglycerides of the edible fatty acids,

polysorbates, sorbitan esters of edible fatty acids, sodium stearyl lactylates, mono- and diglycerides of edible fatty acids esterified with lactic acid (LACTEM), acetic acid (ACETEM) or diacetyltartartic acid (DATEM), polyglycerine esters of edible fatty acids and/or lecithins.

13. O/w emulsion according to one of the previous claims, containing an emulsifier system comprising sodium stearyl lactylates, polyoxyethylene 60 sorbitanmonostearate and mono- and diglycerides of the edible fatty acids in a weight ratio of 1 ~~to~~ 0.5 to 0.7 : 0.3 to 0.5.
14. O/w emulsion according to one of the previous claims, being storage-stable in a pH range of 2.5 to 7.5 and being whippable with an accompanying increase in volume of at least 200 %.
15. O/w emulsion according to one of the previous claims, being mixed as an already-developed emulsion with acidulant, food product selected from acid, neutral and/or alcohol-containing food product or mixtures of two or more of the same.
16. O/w emulsion according to claim 15, wherein the acidulant is selected from lactic acid, citric acid, tartaric acid and/or malic acid and the proportion of acidulant is 0.02 to 0.5 wt.-% (relative to the mixed emulsion).
17. O/w emulsion according to claim 15 or 16, wherein the acid, neutral and/or alcohol-containing food product is selected from fruits, fruit preparations,

fruit syrups, fruit juices, sour milk products, yoghurt products, chocolate preparations, vanilla preparations and/or liqueurs and the weight ratio of emulsion to acid, neutral and/or alcoholic food product is between 99 : 1 and 60 : 40.

18. Process for the preparation of a creamy, milk-free o/w emulsion as defined in one of claims 1 to 14, wherein

- a) edible oil and/or edible fat is heated to a temperature above its melting point and the lipophilic constituents are mixed with the heated edible oil and/or edible fat,
- b) water is heated separately and the hydrophilic constituents are mixed with the heated water,
- c) the oil phase is dispersed into the water phase,
- d) the obtained pre-emulsion is heat-treated (pasteurized, ultra-heat-treated or sterilized),
- e) the pre-emulsion is cooled to a temperature below 100°C,
- f) the pre-emulsion is homogenized under a pressure of 50 to 250 bar and
- g) the obtained oil-in-water emulsion is cooled and packed.

19. Process according to claim 18 for the preparation of a creamy, milk-free o/w emulsion as defined in one of claims 15 to 17, wherein the emulsion from stage g) is mixed in a further step h) with acidulant, food product selected from acid, neutral and/or alcohol-containing food products or mixtures of two or more of the same.

- $\frac{d}{dt} \left(\frac{\partial L}{\partial \dot{x}} \right) = \frac{\partial L}{\partial x}$